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EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2661	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/779,979	KALLIOKULJU ET AL.	
	Examiner	Art Unit	
	Ian N Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18,20-26 and 28-46* is/are rejected.

7)☒ Claim(s) *19 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 October 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant has not responded regarding missing information disclosure statement (IDS) submitted on 2-9-01 (paper number# 4).

2. An objection to the title is withdrawn since it is being amended accordingly.

3. An objection to the drawing for a lack of descriptive legend is withdrawn since it is being amended accordingly.

4. Claims 1-17 is cancelled, and new claims 18-46 are added.

5. Claims 18,20-26,28-46 are rejected by the new and old ground(s) of rejection necessitated by the amendment.

Information Disclosure Statement

6. As recited in previous action, the information disclosure statement submitted on **2-9-01 (paper number# 4)** is missing. Examiner is requesting the applicant to resubmit the missing. IDS.

Specification

7. Applicant is reminded of the proper language and format for an abstract of the disclosure. Abstract contains "means" in line 11.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

8. The abstract of the disclosure is objected to because it contains "(FIG. 7" in line 14. Correction is required. See MPEP § 608.01(b).

Drawings

9. The drawings (FIG. 7) is received on 10-29-2004. This drawing is FIG. 7 not acceptable because the method/steps labels (i.e. steps 706 and 714) are being referred as a "counter". However, the counter(s) is/are incorporated within the originator and receiver.

Claim Objections

10. Claims 18,21,26,29,31,32,33,38,39,40,45 and 46 are objected to because of the following informalities: Appropriate correction is required.

Claim 18 recites "a data packet number" (in line 8), "a data packet number" (in line 12), "**the** convergence protocol packet number" (in line 15), and "**said** convergence protocol packet number" (in line 20). For clarity, it is suggested to define/distinguish the differences between a data packet number recited in lines 8 and 12, and the differences between subsequence convergence protocol packet number.

Claims 26, 33, and 40 are objected for the same reason as recited in claim 18.

Claim 18 recites "a counter" (in line 9), "a counter" (in line 13), "the transmitter's counter" (in line 15-16), and "the receiver's counter" (in line 19). For clarity, it is suggested to define/distinguish the differences between a counter in lines 9 and 13 in accordance with subsequence transmitter's and receiver's counters.

Claim 26 is objected for the same reason as recited in claim 18.

Claim 21 recites "**the** buffer" (in line 2). For clarity, it is suggested to change to "a buffer" since it is reciting for the first time.

Claim 29 is objected for the same reason as recited in claim 21.

Claim 31 recites "a counter" (in line 3). For clarity, it is suggested to define/distinguish whether "a counter" is a new counter, or previously stated counter.

Claims 32,38,39,45, and 46, are objected for the same reason as recited in claim 31.

Claim 33 recites "a first counter" (in line 5), "a second counter" (in line 10), and "a terminal's counter" (in line 18). For clarity, it is suggested to define/distinguish a differences between a terminal's counter and "a first/second counter". Claim 33 recites "form" in line 13, and it should be "from".

Claim 40 recites "a first counter" (in line 5), "a second counter" (in line 10), and "a network element's counter" (in line 18). For clarity, it is suggested to define/distinguish a differences between a network element's counter and a first/second counter. Claim 44 recites "form" in line 13, and it should be "from".

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 18, 33 and 40 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, 30 and 22 of copending Application No. 09/780,529. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1, 30 and 22 of the instant application merely broadens the scope of the claims 18, 33 and 40 of the Patent by eliminating the elements (i.e. a transmitter) and their functions (i.e. transmitting an identification data of convergence protocol packets) of the claims. It has been held that the omission an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd.App.1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

14. Claims 18,20,21,23,25,26,28-30,32,33,35-37,39,40,42-44 and 46 are rejected under 35 U.S.C. 102(a) as being anticipated by 3GTS 25.323 of 3GPP (refers to as 3GPP from hereon).

Regarding Claim 18, 3GPP discloses a method for transmission of data packets (see FIG. 2, Method) in packet-switched telecommunications system (see page 6, section 4.1, paragraph 1; UTRAN, UMTS Terrestrial Radio Access Network), the telecommunications protocol which comprises a convergence protocol layer (see FIG. 2, PDCP, Packet Data Convergence Protocol, and see FIG. 1, PDCP sublayer) for converting user data packets into convergence protocol packets (see FIG. 2 and FIG. 1, user data is converts into PDCP packets; see page 7, section 5, paragraphs 1-3), and a link layer (see FIG. 2, RLC, Radio Link Layer, and see FIG. 1, RLC) for transmitting convergence protocol packets as data units and for acknowledging the transmission (see page 10, section 5.4.1, paragraphs 1-2; RLC acknowledgement), the method comprising the steps of:

defining data packet number (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number) for the convergence protocol packets to be sent by a counter (see FIG. 1, PDU transmit numbering unit on the left; see page 9, section 5.3, paragraphs 1-5; each PDCP SDU is numbered with a PDCP sequence number, the sequence number values is initiated to zero at initialization and increased by one at each PDCP PDU transmission. Thus, it is clear that PDU numbering unit is the counter, which counts the each PDCP PDU upon transmission/transmitting);

transferring the convergence protocol packets to be sent to the link layer for transmission (see FIG. 2 and FIG. 1, note that each PDCP PDU is transmitted towards RLC layer transmission; see page 7, section 5, paragraphs 1-3),

defining a data packet number (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number) for received convergence

protocol packets by a counter (see FIG. 1, PDU received numbering unit on the right; see page 1, section 1; note that PDCP layer is incorporated in both UE and RNC, thus both originator (i.e. UE) and receiver (i.e. RNC) process the packets in the same manner. Also, see page 9, section 5.3, paragraphs 1-5; each PDCP SDU is numbered with a PDCP sequence number, the sequence number values is initiated to zero at initialization and its corresponding is increased by one at each PDCP PDU reception. Thus, it is clear that PDU numbering unit is the counter, which counts the each PDCP PDU upon reception);

acknowledging the received convergence protocol packets (see FIG. 2, acknowledgment; note that the RLC of the receiver node acknowledges the received PDU packet and the acknowledgment is send back to RLC of the originator node; see page 10, section 5.4.1, paragraphs 1-2);

adding the convergence protocol packet number defined by the transmitter's counter (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number from a PDU transmit numbering unit on the left (FIG. 1); see page 11, paragraph 5.5) to the convergence protocol packet be sent (see page 8, paragraph 5.1.1) in response to performance of predetermined process of the telecommunications system (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU in response to user equipment's SRNS relocation (between old SRNC to target SRNC)); and

updating the value of the receiver's counter to correspond to said convergence protocol packet number (page 11, paragraph 5.5; during the relocation, the PDCP sequence numbers are updated by resting to zero or continue from previous value).

Regarding claim 20, 3GPP discloses said predetermined process of the telecommunication system is discard of a data packet (see FIG. 2, originator PDCP layer receiving acknowledgement PDU (i.e. RLC-AM-DATA.cnf); see page 10, section 5.4.1, lines 1-2; note that buffered/unacknowledged PDCP-SDU is deleted when PDP-SDU is confirmed/acknowledge to be transmitted since acknowledgement confirms the successful transmission) or handover (see page 11, section 5.5, paragraphs 1-4; SRNS, Radio Network Subsystem relocation or handoff between old SRNC and target SRNC in the UMTS).

Regarding Claim 21, 3GPP discloses removing unacknowledged user data packets from the buffer (see page 7, section 5, lines 3; PDCP SDU is stored the buffer) in response to the fact that the receiver sends an acknowledgement the transmitter of reception of convergence protocol packet corresponding to the user data packet sent after the unacknowledged user data packets (see FIG. 2, originator PDCP layer receiving acknowledgement PDU (i.e. RLC-AM-DATA.cnf); see page 10, section 5.4.1, lines 1-2; note that buffered/unacknowledge PDCP-SDU is deleted when PDP-SDU is confirmed/acknowledge to be transmitted since acknowledgement confirms the successful transmission).

Regarding claim 23, 3GPP discloses wherein said telecommunications system is a packet-switched mobile communication system, such as the UMTS or the GPRS system (see page 6, section 4.1, paragraph 1; UTRAN, a packet switched UMTS Terrestrial Radio Access Network), which utilizes acknowledged transmission (see FIG. 2, acknowledgment).

Regarding claim 25, 3GPP discloses a handover between radio network subsystems in the UMTS (see page 11, section 5.5, paragraphs 1-4; SRNS, Radio Network Subsystem relocation or handoff between old SRNC and target SRNC in the UMTS).

Regarding Claim 26, an apparatus claim, which has substantially disclose all the limitations of the respective claim 18. Therefore, it is subjected to the same rejection.

Regarding Claim 28, the claim, which has substantially disclose all the limitations of the respective claim 20. Therefore, it is subjected to the same rejection.

Regarding Claim 29, the claim, which has substantially disclose all the limitations of the respective claim 21. Therefore, it is subjected to the same rejection.

Regarding claim 30, 3GPP discloses wherein said telecommunications system is a packet-switched mobile communication system, such as the UMTS or the GPRS system (see page 6, section 4.1, paragraph 1; UTRAN, a packet switched UMTS Terrestrial Radio Access Network), which utilizes acknowledged transmission (see FIG. 2, acknowledgment).

Regarding claim 32, 3GPP discloses wherein the system is arranged to define, by means of a counter (see FIG. 1, PDU transmit numbering unit), the convergence protocol packet number in handover between radio network subsystems in the UMTS (see page 11, section 5.5, paragraphs 1-4; SRNS, Radio Network Subsystem relocation or handoff between old SRNC and target SRNC in the UMTS).

Regarding Claim 33, 3GPP discloses a network element (see FIG. 2, RNC, Originator) for a packet-switched telecommunication system (see page 6, section 4.1, paragraph 1; UTRAN, UMTS Terrestrial Radio Access Network), said network element being arranged to transmit data packets to a terminal (see FIG. 2, UE, Receiver), see page 5,

section 1, paragraph 2) supporting a packet-switched data transmission (see page 7, section 5, paragraphs 1-2; IP data streams), said network element comprising:

means of a first counter (see FIG. 1, PDU transmit numbering unit on the left) for defining a data packet number (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number) for convergence protocol packets to be transmitted between the network element and the terminal (see page 9, section 5.3, paragraphs 1-5; each PDCP SDU is numbered with a PDCP sequence number, the sequence number values is initiated to zero at initialization and increased by one at each PDCP PDU transmission. Thus, it is clear that PDU numbering is the counter, which counts the each PDCP PDU upon transmission/transmitting from RNC to UE);

means for transferring the convergence protocol packets to be transmitted to the link layer (see FIG. 2, RLC, Radio Link Layer, and see FIG. 1, RLC) to be transmitted (see FIG. 2 and FIG. 1, note that each PDCP PDU is transmitted towards RLC layer transmission; see page 7, section 5, paragraphs 1-3);

means of second counter (see FIG. 1, PDU received numbering unit on the right) for defining a data packet number (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number) for the received convergence protocol packets (see page 1, section 1; note that PDCP layer is incorporated in both UE and RNC, thus both originator (i.e. UE) and receiver (i.e. RNC) process the packets in the same manner. Also, see page 9, section 5.3, paragraphs 1-5; each PDCP SDU is numbered with a PDCP sequence number, the sequence number values is initiated to zero at initialization and its

corresponding is increased by one at each PDCP PDU reception. Thus, it is clear that PDU numbering unit is the counter, which counts the each PDCP PDU upon reception);

means for receiving acknowledgements of the received convergence protocol packets from said terminal (see FIG. 2, acknowledgment; note that the RLC of the receiver node (i.e. UE) acknowledges the received PDU packet and the acknowledgment is send back to RLC of the originator node (i.e. RNC); see page 10, section 5.4.1, paragraphs 1-2); and

means, responsive performance of predetermined process the telecommunications system (see page 11, paragraph 5.5; in response to user equipment's SRNS relocation (between old SRNC to target SRNC)), for adding the convergence protocol packet number (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU) defined by the first counter (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number from a PDU transmit numbering unit on the left (FIG. 1); see page 11, paragraph 5.5) to the convergence protocol packet to be sent to the terminal (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU sent to the UE in response to user equipment's SRNS relocation (between old SRNC to target SRNC))

for updating the value a terminal's counter (see FIG. 1, a PDU transmit numbering unit on the left) to correspond to said convergence protocol packet number (page 11, paragraph 5.5; during the relocation, the PDCP sequence numbers are updated by resting to zero or continue from previous value).

Regarding Claim 35, the claim, which has substantially disclose all the limitations of the respective claim 20. Therefore, it is subjected to the same rejection.

Regarding Claim 36, the claim, which has substantially disclose all the limitations of the respective claim 21. Therefore, it is subjected to the same rejection.

Regarding claim 37, 3GPP discloses wherein said telecommunications system is a packet-switched mobile communication system, such as the UMTS or the GPRS system (see page 6, section 4.1, paragraph 1; UTRAN, a packet switched UMTS Terrestrial Radio Access Network), which utilizes acknowledged transmission (see FIG. 2, acknowledgment).

Regarding claim 39, 3GPP discloses wherein the system is arranged to define, by means of a counter (see FIG. 1, PDU transmit numbering unit), the convergence protocol packet number in handover between radio network subsystems in the UMTS (see page 11, section 5.5, paragraphs 1-4; SRNS, Radio Network Subsystem relocation or handoff between old SRNC and target SRNC in the UMTS).

Regarding Claim 40, 3GPP discloses a terminal (see FIG. 2, UE, Originator) for a packet-switched telecommunication system (see page 6, section 4.1, paragraph 1; UTRAN, UMTS Terrestrial Radio Access Network), said terminal being arranged transmit data packets network element (see FIG. 2, RNC, Receiver) supporting a packet-switched data transmission (see page 7, section 5, paragraphs 1-2; IP data streams), said terminal comprising:

means of a first counter (see FIG. 1, PDU transmit numbering unit on the left) for defining a data packet number (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number) for convergence protocol packets to be transmitted between the terminal and the network element (see page 9, section 5.3, paragraphs 1-5; each PDCP SDU is numbered with a PDCP sequence number, the sequence

number values is initiated to zero at initialization and increased by one at each PDCP PDU transmission. Thus, it is clear that PDU numbering is the counter, which counts the each PDCP PDU upon transmission/transmitting from UE to RNC);

means for transferring the convergence protocol packets to be transmitted to the layer to be transmitted (see FIG. 2, RLC, Radio Link Layer, and see FIG. 1, RLC) to be transmitted (see FIG. 2 and FIG. 1, note that each PDCP PDU is transmitted towards RLC layer transmission; see page 7, section 5, paragraphs 1-3);

means of second counter (see FIG. 1, PDU received numbering unit on the right) for defining a data packet number (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number) for the received convergence protocol packets (see page 1, section 1; note that PDCP layer is incorporated in both UE and RNC, thus both originator (i.e. UE) and receiver (i.e. RNC) process the packets in the same manner. Also, see page 9, section 5.3, paragraphs 1-5; each PDCP SDU is numbered with a PDCP sequence number, the sequence number values is initiated to zero at initialization and its corresponding is increased by one at each PDCP PDU reception. Thus, it is clear that PDU numbering unit is the counter, which counts the each PDCP PDU upon reception);

means for receiving acknowledgements of the received convergence protocol packets from said network element (see FIG. 2, acknowledgment; note that the RLC of the receiver node (i.e. RNC) acknowledges the received PDU packet and the acknowledgment is send back to RLC of the originator node (i.e. UE); see page 10, section 5.4.1, paragraphs 1-2); and

means, responsive performance of a predetermined process of the telecommunications system, for adding the convergence protocol packet number defined by the first counter to the convergence protocol packet to be sent to the network element

means, responsive performance of predetermined process the telecommunications system (see page 11, paragraph 5.5; in response to user equipment's SRNS relocation (between old SRNC to target SRNC)), for adding the convergence protocol packet number (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU) defined by the first counter (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number from a PDU transmit numbering unit on the left (FIG. 1); see page 11, paragraph 5.5) to the convergence protocol packet to be sent to the network element (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU sent to the RNC in response to user equipment's SRNS relocation (between old SRNC to target SRNC))

for updating of the value of a network element's counter (see FIG. 1, a PDU transmit numbering unit on the left) to correspond to said convergence protocol packet number (page 11, paragraph 5.5; during the relocation, the PDCP sequence numbers are updated by resting to zero or continue from previous value).

Regarding Claim 42, the claim, which has substantially disclose all the limitations of the respective claim 20. Therefore, it is subjected to the same rejection.

Regarding Claim 43, the claim, which has substantially disclose all the limitations of the respective claim 21. Therefore, it is subjected to the same rejection.

Regarding claim 44, 3GPP discloses wherein said telecommunications system is a packet-switched mobile communication system, such as the UMTS or the GPRS system (see page 6, section 4.1, paragraph 1; UTRAN, a packet switched UMTS Terrestrial Radio Access Network), which utilizes acknowledged transmission (see FIG. 2, acknowledgment).

Regarding Claim 46, the claim, which has substantially disclose all the limitations of the respective claim 39. Therefore, it is subjected to the same rejection.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claim 22, 34 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP in view of Grohn (U.S. 6,405,337).

Regarding Claim 22, 3GPP discloses adding of the convergence protocol packet number (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU) defined the transmitter's counter the convergence protocol packet (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number from a PDU transmit numbering unit on the left (FIG. 1); see page 11, paragraph 5.5) to that first in the transmitter's buffer (see page 7, section 5, lines 3; PDCP SDU is stored the buffer) response the fact that at least one user data packet has been removed from the transmitter's

buffer (see page 9-10, paragraph 5.3 and 5.4.1; see FIG. 2, the first sequence number packet is removed from the buffer when transmitting).

3GPP does not explicitly disclose transmitting/retransmitting when the maximum value retransmissions defined the link layer has been exceeded. However, Grohn teaches the packet that first in the transmitter's buffer response the fact that at least one unacknowledged user data packet has been removed from the transmitter's buffer after the maximum value retransmissions has been exceeded (see FIG. 3, steps 310,320,330; the unacknowledged packet is removed from the buffer in order to transmit/retransmit when retransmission timeout; see col. 4, lines 15-30, 44 to col. 5, lines 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide retransmission the unacknowledged packet when the adjustable retransmission timer timeouts, as taught by Grohn in the system of 3GPP, so that it would increase the overall communication speed between communication devices and the number of errors may be tolerated by utilizing retransmission; see Grohn col. 2, line 60-67.

Regarding Claim 34, 3GPP discloses said means for adding the convergence protocol packet number are arranged the convergence protocol packet data number (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU) defined by the second counter (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number from a PDU transmit numbering unit on the Right (FIG. 1); see page 11, paragraph 5.5) to the convergence protocol packet to sent (see page 7, section 5, lines 3; PDCP SDU is stored and sent by the buffer) in response to the link layer transmission

of Convergence protocol packets (see page 9-10, paragraph 5.3 and 5.4.1; see FIG. 2, the first sequence number packet is removed from the buffer when transmitting).

3GPP does not explicitly disclose transmitting/retransmitting at predetermined intervals in response to being unable to guarantee acknowledged transmission. However, Grohn teaches sending sent at predetermined intervals response to being unable to guarantee acknowledged transmission of packets (see FIG. 3, steps 310,320,330; the unacknowledged/unable to guarantee packet is removed from the buffer in order to transmit/retransmit when predetermined retransmission timeout; see col. 4, lines 15-30, 44 to col. 5, lines 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide retransmission the unacknowledged packet when the adjustable retransmission timer timeouts, as taught by Grohn in the system of 3GPP, so that it would increase the overall communication speed between communication devices and the number of errors may be tolerated by utilizing retransmission; see Grohn col. 2, line 60-67.

Regarding Claim 41, the claim, which has substantially disclose all the limitations of the respective claim 20. Therefore, it is subjected to the same rejection.

17. Claims 24, 31, 38 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP in view of Widegren (U.S. 6,374,112).

Regarding claim 24, 3GPP disclose a handover in the UMTS (see page 11, section 5.5, paragraphs 1-4; SRNS, Radio Network Subsystem relocation or handoff between old SRNC and target SRNC in the UMTS).

3GPP does not explicitly disclose a handover between the UMTS and the GPRS. Widegren'112 discloses a handover (see col. 12, lines 32-65; handoffs) between the UMTS (see FIG. 1, UMTS 24) and the GPRS (see FIG. 1, GPRS 20 within Core network 16; note that MS 30 is handoff between GPRS network BS 23 to UMTS network BS 28; Widegren'112 col. 5, line 40-55).

However, the above-mentioned claimed limitations are taught by Widegren'112. In view of this, having the system of 3GPP and then given the teaching of Widegren'112, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of 3GPP, for the purpose of providing a handoff between GPRS and UMTS, as taught by Widegren'112, since Widegren'112 states the advantages/benefits at col. 1, lines 10-12, 12-13, 40-56 that it would provide flexibility communication between wide variety of mobile communication services and efficiently allocating resources. 3GPP also discloses the PDCP method would provide functions that help to improve channel efficiency (see 3GPP page 6, section 4.1, paragraphs 3). The motivation being that by providing a handoff between different generation systems, it can increase the service providers' capability to provide wide variety of services over various generation of network, and also utilizing PDCP method as proposed by 3GPP, would improve channel efficiency and reliability during handoff.

Regarding Claim 31, 3GPP discloses wherein the system is arranged to define, by means of a counter (see FIG. 1, PDU transmit numbering unit), the convergence protocol packet number as described above in claim 26. 3GPP further discloses a handover in the

UMTS (see page 11, section 5.5, paragraphs 1-4; SRNS, Radio Network Subsystem relocation or handoff between old SRNC and target SRNC in the UMTS).

3GPP does not explicitly disclose a handover between the UMTS and the GPRS. Widegren'112 discloses a handover (see col. 12, lines 32-65; handoffs) between the UMTS (see FIG. 1, UMTS 24) and the GPRS (see FIG. 1, GPRS 20 within Core network 16; note that MS 30 is handoff between GPRS network BS 23 to UMTS network BS 28; Widegren'112 col. 5, line 40-55).

However, the above-mentioned claimed limitations are taught by Widegren'112. In view of this, having the system of 3GPP and then given the teaching of Widegren'112, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of 3GPP, for the purpose of providing a handoff between GPRS and UMTS, as taught by Widegren'112, since Widegren'112 states the advantages/benefits at col. 1, lines 10-12, 12-13, 40-56 that it would provide flexibility communication between wide variety of mobile communication services and efficiently allocating resources. 3GPP also discloses the PDCP method would provide functions that help to improve channel efficiency (see 3GPP page 6, section 4.1, paragraphs 3). The motivation being that by providing a handoff between different generation systems, it can increase the service providers' capability to provide wide variety of services over various generation of network, and also utilizing PDCP method as proposed by 3GPP, would improve channel efficiency and reliability during handoff.

Regarding Claim 38, the claim, which has substantially disclose all the limitations of the respective claim 31. Therefore, it is subjected to the same rejection.

Regarding Claim 45, the claim, which has substantially disclose all the limitations of the respective claim 31. Therefore, it is subjected to the same rejection.

Allowable Subject Matter

18. Claims 19 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

19. Applicant's arguments with respect to claims 18,20-26,28-46 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 18,20-26,28-46, the applicant argued that, "...3GPP reference is missing ...adding the convergence protocol packet number defined by the transmitter's counter to the convergence protocol packet to be sent in response to performance of a predetermined process of the telecommunication system; and updating the value of the receiver's counter to correspond to said convergence protocol packet number..." in page 16, paragraph 3-4.

In response to applicant's argument, the examiner respectfully disagrees that 3GPP reference is missing ...adding the convergence protocol packet number defined by the transmitter's counter to the convergence protocol packet to be sent in response to performance of a predetermined process of the telecommunication system; and updating the value of the receiver's counter to correspond to said convergence protocol packet number.

3GPP discloses adding the convergence protocol packet number defined by the transmitter's counter (see Table 5, PDCP with PID; see page 7, section 5, paragraph 3, PDCP Service data unit (SDU) sequence number from a PDU transmit numbering unit on the left (FIG. 1); see page 11, paragraph 5.5) to the convergence protocol packet be sent (see page 8, paragraph 5.1.1) in response to performance of predetermined process of the telecommunications system (see page 11, paragraph 5.5; assigning sequence number PID into PDCP PDU in response to user equipment's SRNS relocation (between old SRNC to target SRNC)); and updating the value of the receiver's counter to correspond to said convergence protocol packet number (page 11, paragraph 5.5; during the relocation, the PDCP sequence numbers are updated by resting to zero or continue from previous value).

Regarding claims 18,20-26,28-46, the applicant argued that, "...the new independent claims describe an arrangement...in other words, regardless of the fact that all missing or erroneous data packets cannot be transmitted to the receiver, the receiver counter can be synchronized to the transmitter counter in such a way that convergence protocol packet number is attached to the data packet to be sent only when certain process, like discard of data packet or handover takes place. Then, the receiver can synchronize its counter with the transmitter's counter..." in page 15, paragraph 2-3.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., regardless of the fact that all missing or erroneous data packets cannot be transmitted to the receiver, the receiver counter can be synchronized to the transmitter counter in such a way that convergence protocol packet number is attached to the data packet to be sent only when

certain process, like discard of data packet or handover takes place. Then, the receiver can synchronize its counter with the transmitter's counter) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Note that all applicant recite in the claim is adding a sequence number to the packet by the transmitter counter/numbering mechanism in response to some predetermined process and update the value of receiver's counter in accordance with received packet number. None of which detailed limitations, which applicant arguing above, are not being claimed.

Regarding claims 18,20-26,28-46, the applicant argued that, "...the deficiencies of the primary reference are not remedied by combination with the teaching or Widegren...does not teach how data packet numbering should be arranged....would not be have been obvious to one skilled in the art..." in page 17, paragraph 2-3.

In response to applicant's argument, the examiner respectfully disagrees 3GPP primary reference is deficient by not teaching how data packet number should be arranged. For, 3GPP teaching of how data packet number should be arranged, please see above response and detailed office action. Since 3GPP is already teaching how data packet number should be arranged, there is no need for Widegren to teach how data packet number should be arranged. Widegren simply teaches the handover between UMTS and GPRS system, and motivation to combine the references is previously stated in the office action. In particular, Widegren'112 states the advantages/benefits at col. 1, lines 10-12, 12-13, 40-56 that it would provide flexibility communication between wide variety of mobile communication services

and efficiently allocating resources. 3GPP also discloses the PDCP method would provide functions that help to improve channel efficiency (see 3GPP page 6, section 4.1, paragraphs 3). The motivation being that by providing a handoff between different generation systems, it can increase the service providers' capability to provide wide variety of services over various generation of network, and also utilizing PDCP method as proposed by 3GPP, would improve channel efficiency and reliability during handoff.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
2/16/05

BOB PHUNKULH
PRIMARY EXAMINER